Motion Control System
DF64 ProcedureDevelopmant
ACS ArrivalModing
December 5, 1997

Identification Section:

Procedure Name:	ACS_Arrival_Moding.
Applicability:	Arrival of Flight 3A.
Frequency:	This procedure is performed during the arrival sequence.
Objective:	Operational sequence used to automatically mode the Station from RS attitude control upon Orbiter arrival.
Description:	LED mode indication (i.e., RS ACS mode status) lighting is enabled to provide a visual indication of the stations current ACS mode status.
Crew Required:	One (non-specified) crew member is required for visual status check.
Power:	N/A
Data:	Required telemetry is given in the procedure.
Duration:	Concurrent with integrated and arrival proxops timeline.
Location:	PMA2.
Parts:	PMA2 APAS docking mechanisms; Node 1MDMs; RS segment MDMs and Propulsion system.
Materials:	N/A
Tools:	N/A
Constraints:	N/A
Assumptions:	Orbiter provides attitude control for the mated stack.
Reference Materials:	S684-10174 - 5/15/96; MDC 95H0250B 3/15/96 (Russian data), Pass2-100% 2A/3A Command and Telemetry file.

ACS ARRIVAL MODING

NOTE
Mode initialization should be performed one hour before entering the Orbiter prox-ops phase.

1. VERIFY ACS MODING PRE-ARRIVAL CONFIGURATION AND STATUS

PCS MCS: ACS Moding

ACS Moding

'ACS Configuration'

Verify Moding Role Arm box is not active.

√Moding Role Primary NCS - Full
√Moding Role Secondary NCS - Full

'Arrival'

√PMA2 Arrival Response SW Primary, Secondary NCS - Inh

'Departure'

√PMA2 Departure Response SW Primary, Secondary NCS - Inh

2. ENABLE APAS LED LIGHTING

NOTE
Each of the primary and secondary commands turns on two of the four LED ACS indication lights (i.e., 4 total). LED configuration: ON - Active Attitude Control, OFF - Software Off, FLASH - Station in Free-Drift.

'ACS Configuration'

sel LED Control SW
'Primary NCS'
cmd Enable
√LED Control SW - Ena
√PMA2 LED State - On

'Secondary NCS'
cmd Enable
√LED Control SW - Ena
√PMA2 LED State - On

Visual check by Orbiter crew that APAS LEDs are On (-Z window)

3. VERIFY RUSSIAN SEGMENT MODE STATUS

'ACS Configuration'

√RS Mode Primary, Secondary NCS - Cntl

NOTE
If LEDs are not on, verify with MCC-H/MCC-M that ISS is in active attitude control.

4. ENABLE ARRIVAL SOFTWARE SWITCH MONITORING FOR ACS MODING

PCS MCS: ACS Moding

ACS Moding

'Arrival'

sel PMA2 Arrival Response SW
'Primary NCS'
cmd Enable
√Arrival SW - Ena

'Secondary NCS'
cmd Enable
√Arrival SW - Ena

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* If Primary/Secondary NCS Arrival Response SW Arm will not need to be *
* used wave off, ect), then the following commands should be sent: *
* *
* sell PMA2 Arrival Response SW *
* 'Primary, Secondary NCS' *
* **Cmd** Inhibit *
* √PMA2 Arrival Response SW - Inh *
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5. ATTITUDE CONTROL SYSTEMARRIVAL MONITORING AND MODING

Verify **MCC-H/MCC-M** Go for Orbiter Arrival/Docking

'Departure'

√PMA2 Interface Sealed Primary, Secondary NCS - X

'Arrival'

√PMA2 Capture Long Primary, Secondary NCS - X

√Arrival Event Primary NCS - X
√Arrival Event Secondary NCS - X

√PMA2 LED State Primary, Secondary NCS - Flash

Visual check by Orbiter crew that APAS LEDs are Flashing (-Z window)